

UTILITY RELOCATION AGREEMENT
(BNSF ROW – Utility Cost)

THIS UTILITY RELOCATION AGREEMENT (this "**Agreement**") is entered into the _____ day of _____, 20__, between **Orange County Sanitation District** ("**OC San**"), and **BNSF RAILWAY COMPANY**, a Delaware corporation ("**BNSF**").

RECITALS

A. BNSF proposes to construct an additional rail line in Line Segment 7602, Atwood to Esperanza MP 35.7 to MP 40.4 – Third Main Track Expansion Project (the "**Project**").

B. BNSF has notified OC San that its utility facilities and appurtenances (the "**Utilities**") located on South Richfield Road and East Orangethorpe Avenue in the City of Placentia are in locational conflict with the Project and has requested that OC San construct additional pipe protection of the Utilities (the "**Work**") as necessary to accommodate the Project.

C. OC San has provided BNSF with a copy of all documentation outlining the Work to be performed and the design and specifications of all related appurtenances, adjustments, existing utilities, and reinforcements of the utility, which outlining documentation will also include the construction of the additional protection of the Utilities (collectively, the "**Plans**"), which Plans have been approved by BNSF and a copy of which Plans are attached hereto and made a part hereof as **Exhibit A**.

D. In order to avoid delay to the Project, BNSF intends to perform the Work in accordance with Exhibit A and seek reimbursement from OC San.

E. BNSF and OC San desire to enter into this Agreement to outline their respective obligations regarding the cost and timely execution of the Work by BNSF.

AGREEMENTS

For and in consideration of the foregoing recitals which are incorporated herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, BNSF and OC San agree as follows:

Section 1: **Recitals.** The Recitals above are deemed true and correct, are hereby incorporated in this Section as though fully set forth herein, and each Party to this Agreement acknowledges and agrees that they are bound by the same.

Section 2: **Elements of Agreement.** BNSF and OC San will work cooperatively together so BNSF's Project and OC San's Work can be constructed in a manner that minimizes the costs and impacts to all Parties and the public. The specific terms and conditions governing the elements of this Agreement are set forth hereinafter.

Section 3: **BNSF's Specific Obligations.**

- A. BNSF will be responsible for compliance with the California Environmental Quality Act (“CEQA”) and all other permitting requirements
- B. BNSF will administer and enter into a construction contract to perform the Work in accordance with the Plans and specifications provided by OC San.
- C. Upon determination of the successful bidder, BNSF will submit relevant documentation to OC San for its files.
- D. For the duration of project construction, BNSF will:
 - a. Promptly inform OC San of any proposed changes to the construction contract as it relates to OC San facilities. Copies of proposed changes affecting OC San will be provided to OC San within five (5) working days of submission to BNSF. All changes will be subject to OC San’s approval. OC San agrees not to unreasonably withhold its approval;
 - b. Provide OC San staff with contractor schedules and updates within five (5) days of acceptance by BNSF staff and;
 - c. Invite OC San staff to construction progress meetings.
 - d. Notify OC San 48 hours prior to the need for an inspection.
- E. BNSF will document and inform OC San of the date of the completion of the Work.
- F. BNSF will obtain on behalf of OC San a one-year warranty on the Work to be performed by BNSF’s construction contractor. Such warranty will read as follows:

“Contractor guarantees for a period of one (1) year from the date of final acceptance of the work by BNSF (for OC San) that the Contractor will repair or remove and replace any work, together with any other work which may be displaced in so doing, that is found to be defective in workmanship and/or materials without any expense to BNSF or its assigns, ordinary wear and tear excepted. If Contractor fails to comply with this warranty within one (1) week after being notified in writing, BNSF (OC San) or its assigns are authorized to proceed to have the defects remedied at Contractor’s expense. Contractor will pay the cost and charges thereof immediately on demand. If, in the opinion of BNSF (OC San) or its assigns, defective work detected during the guarantee

period creates a dangerous condition or requires immediate correction or modification to prevent further loss to BNSF (OC San) or its assigns or to prevent interruption of BNSF's (OC San) or its assigns' operations, BNSF (OC San) or its assigns will be authorized to repair the condition without prior notice to the Contractor and Contractor will pay the cost and charges thereof immediately upon demand. Contractor's obligations under this section are in addition to Contractor's other express or implied assurances under the Construction Contract and State law and in no way diminish any other rights that BNSF (OC San) or its assigns may have against Contractor for faulty materials, equipment, or work. Contractor agrees that this warranty and guarantee will be freely assignable to the Orange County Sanitation District without any further notice to or consent from Contractor. The Faithful Performance Bond and Labor and Materials Bond required under the Agreement will continue in full force and effect for the guarantee period."

Section 4: OC San's Specific Obligations.

- A. At OC San's expense, OC San entered into and administered contracts for the design services necessary to prepare the Plans that will be used to perform the Work. The Plans have been reviewed and approved by BNSF. A copy of the Plans are attached as **Exhibit A.**

- B. OC San will provide, at OC San's expense, inspection services as it deems necessary to assure compliance with the approved Plans and Specifications, including, but not limited to, shop drawing review and/or material inspection thereof, provided that OC San inspectors are provided uninhibited access to the project area and an adequate on-site work space to perform such services. OC San will promptly notify BNSF if any portion of the work appears not to conform to the Plans and Specifications, and will work with the BNSF to resolve all discrepancies.

- C. OC San will respond to BNSF's request for an inspection within 48 hours. OC San will be responsible for Contractor's downtime due to failure to comply with this provision.

- D. OC San's obligation to reimburse BNSF hereunder for the Work shall not exceed a cumulative total of one hundred twenty-one thousand sixty-five dollars (\$121,065) unless otherwise approved by OC San, or provided herein. If OC San's obligation to reimburse BNSF for the Sewer Modification Project exceeds one hundred twenty-one thousand sixty-five dollars (\$121,065), BNSF shall not be responsible for bearing OC San's excess share. BNSF agrees to notify OC San at the earliest opportunity if OC San's share is expected to exceed one hundred twenty-one thousand sixty-five dollars (\$121,065) at any time during the project. If reimbursement over and above one hundred twenty-one thousand sixty-five dollars (\$121,065) is requested by BNSF, OC San staff will request

approval from OC San's General Manager or Board of Directors, as appropriate, to increase the maximum reimbursement amount.

Section 5: Timing of Reimbursement

- A. For each progress payment, including the final progress payment, made by BNSF to its consultant or contractor, BNSF shall submit an invoice to OC San setting forth OC San's share of the payment, accompanied by a copy of any documentation processed with the progress payment or other documentation to substantiate the calculation of OC San's portion. OC San shall pay BNSF within thirty (30) days of OC San's receipt of all required invoices and supporting documentation.

Section 6: BNSF and OC San shall each pay their respective attorneys' fees.

Section 7: This Agreement may be executed in any number of counterparts with the same effect as if all parties hereto had signed the same document. All such counterparts shall be construed together and shall constitute one agreement, but in making proof hereof it shall only be necessary to produce one such counterpart.

Section 8: This Agreement (a) shall be binding upon and inure to the benefit of BNSF and OC San and their respective legal representatives, successors and assigns; (b) may be modified or amended only by a writing signed by each party hereto; and (c) shall be governed by and construed in accordance with the laws of the State of Texas. Notwithstanding anything herein to the contrary, the OC San may not assign its rights and obligations under this Agreement without the prior written consent of BNSF. BNSF may assign its rights or obligations under this Agreement without the OC San's consent, but with notice to the OC San.

The parties hereto have caused this Agreement to be executed in duplicate by their duly authorized representatives to be effective as of the date set forth above.

**ORANGE COUNTY SANITATION
DISTRICT**

BNSF RAILWAY COMPANY

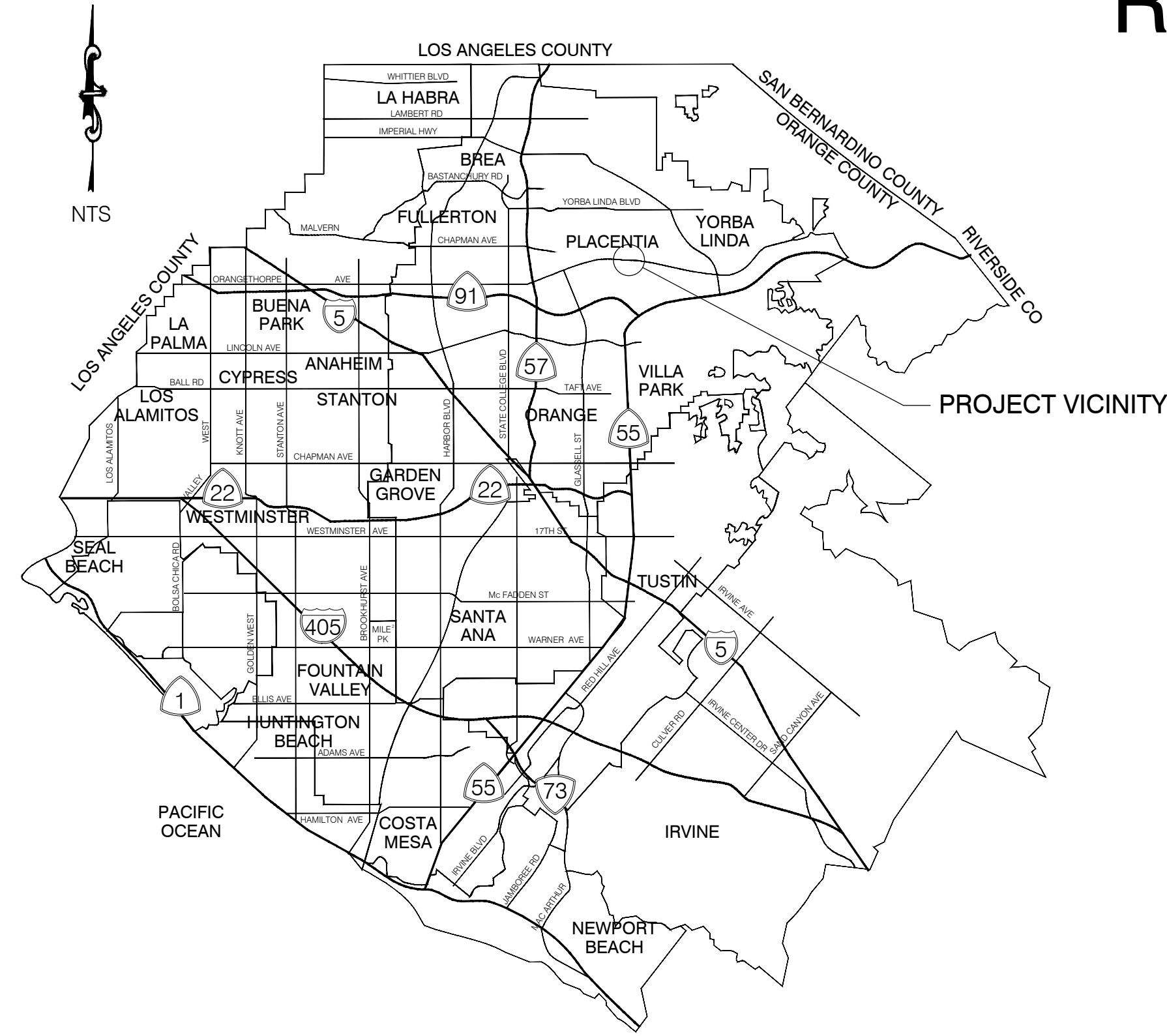
By: _____
Printed Name: _____
Title: _____

By: _____
Printed Name: _____
Title: _____

ORANGE COUNTY SANITATION DISTRICT PROJECT NO. FRC-0011

EXHIBIT
A The Plans

RICHFIELD SUBTRUNK ENCASEMENT FOR BNSF RAILWAY ADDITION



VICINITY MAP



LOCATION MAP

DRAWINGS: GENERAL, CIVIL, STRUCTURAL

- G-00A COVER SHEET
- S-010 GENERAL NOTES, SPECIAL INSPECTIONS AND ABBREVIATIONS
- C-100 PROPOSED PIPE ENCASEMENT PLAN
- C-200 CROSS SECTION
- S-501 STRUCTURAL SECTIONS
- S-502 STRUCTURAL SECTION AND DETAIL

APPROVED FOR BIDDING ORANGE COUNTY SANITATION DISTRICT

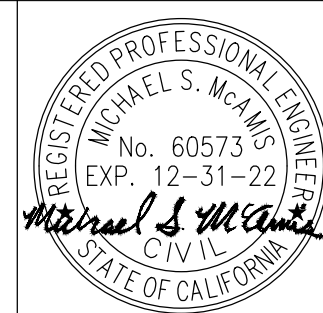
KATHLEEN T. MILLEA - DIRECTOR OF ENGINEERING DATE: 12/2/2021

EROS YONG - ENGINEERING MANAGER DATE: 11/22/2021

ADAM NAZAROFF - PROJECT MANAGER DATE:

DESIGNED BY: JN
DRAWN BY: JN
CHECKED BY: EM

LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2"=SCALE ACCORDINGLY)



RICHFIELD SUBTRUNK ENCASEMENT
FOR BNSF RAILWAY ADDITION

COVER SHEET

FRC-0011

DRAWING NO.

G-00A

OF -

DWG: C:\Users\jaganan\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-G-00A.dwg
 DATE: Nov 19, 2021 8:41am USER: jaganan01

| MARK | DESCRIPTION | DATE | APPR. |
|------|---------------------------|----------|-------|
| A | ISSUE FOR FINAL SUBMITTAL | 11/19/21 | |

GENERAL STRUCTURAL NOTES

1. INTENT OF THE DRAWINGS

THESE DRAWINGS ARE FOR BID PURPOSE ONLY.

- A. THE GENERAL NOTES APPLY TO ALL STRUCTURAL WORK EXCEPT WHERE THEY CONFLICT WITH DETAILS AND NOTES SPECIFICALLY SHOWN AND NOTED.
- B. RESOLVE ALL CONFLICTS AND AMBIGUITIES BETWEEN DRAWINGS AND EXISTING CONDITIONS BEFORE PROCEEDING WITH BID.
- C. ALL REQUIRED DETAILS OR DIMENSIONS NOT SHOWN SPECIFICALLY SHALL BE OF SIMILAR CHARACTER AS SHOWN FOR SIMILAR CONDITIONS.

2. EXISTING CONDITIONS

THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS PERTINENT TO THE WORK PRIOR TO MATERIAL FABRICATION AND/OR CONSTRUCTION. FIELD CONDITIONS DIFFERENT FROM THOSE NOTED ON THE DRAWINGS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ENGINEER.

3. BASIS OF DESIGN

- A. CALIFORNIA BUILDING CODE, 2019 EDITION.
- B. AMERICAN CONCRETE INSTITUTE (ACI), BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE, ACI 318-19.
- C. AMERICAN CONCRETE INSTITUTE (ACI), CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES, ACI 350-06.
- D. AMERICAN SOCIETY OF CIVIL ENGINEERS, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, ASCE 7-16.
- E. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) 15TH EDITION.

4. CONCRETE - (CONTRACTOR SHALL HIRE LAB FOR TESTING)

A. MATERIALS

| NO. | DESCRIPTION | STANDARD | NOTES |
|-----|--------------------------------|-------------------------------|--|
| 1 | PORTLAND CEMENT | ASTM C150 TYPE I/II | LOW-ALKALI, SULFATE RESISTANT |
| 2 | COARSE AGGREGATE | ASTM C33 AND ASTM C1178 | MINIMUM C.V. (CLEANLINESS VALUE) OF 75 PER CALTRANS TEST 227 |
| 3 | FINE AGGREGATE | ASTM C33 AND ASTM C1178 | MINIMUM C.V. (CLEANLINESS VALUE) OF 75 PER CALTRANS TEST 217 |
| 4 | WATER | ASTM 1602 | |
| 5 | FLY ASH | ASTM C618 CLASS F | U.S. MANUFACTURED |
| 6 | SILICA FUME | ASTM C1240 | |
| 7 | SLAG | ASTM C989 | |
| 8 | REINFORCING STEEL | ASTM A615 OR A706 GRADE 60 | DEFORMED BAR UNO |
| 9 | EPOXY-COATED REINFORCING STEEL | ASTM A775 | DEFORMED BAR LOWER BEARING PAD |
| 10 | WATERPROOF SHEET MATERIALS | ASTM C171 | FOR DAMP CURING |
| 11 | BURLAP | AASHTO M182 | FOR DAMP CURING |
| 12 | CURING COMPOUND | ASTM C309 TYPE 1 CLASS A OR B | |

- B. NORMAL WEIGHT CONCRETE: 150 PCF. MIN COMPRESSIVE STRENGTH OF CONCRETE, $f_c=4,000$ PSI AT 28-DAY.
- C. CONCRETE MIXES DESIGN.
- D. HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS SHALL BE ROUGHENED TO 1/4" AMPLITUDE, UNO. REMOVE LAITANCE AND CLEAN SURFACE PRIOR TO THE PLACEMENT OF ADJACENT CONCRETE.
- E. MAKE LAP SPLICES ONLY AT THE LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS OR AS APPROVED BY THE ENGINEER. WHERE LENGTHS ARE NOT SPECIFIED, PROVIDE DEVELOPMENT, STANDARD HOOK DEVELOPMENT AND LAP SPLICES LENGTHS AS FOLLOWS:

| CONCRETE STRENGTH PSI | | BAR SIZE | | | | | | | | | |
|-----------------------|----|----------|----|----|----|----|----|----|-----|-----|-----|
| | | #3 | #4 | #5 | #6 | #7 | #8 | #9 | #10 | #11 | #14 |
| 4000 | Ld | 15 | 19 | 24 | 29 | 42 | 48 | 54 | 61 | 67 | 81 |
| | Ls | 19 | 25 | 31 | 37 | 54 | 62 | 70 | 79 | 87 | N/A |
| 5000 | Ld | 13 | 17 | 22 | 26 | 37 | 43 | 48 | 54 | 60 | 72 |
| | Ls | 17 | 22 | 28 | 33 | 49 | 56 | 63 | 70 | N/A | N/A |

DEVELOPMENT LENGTH (Ld), STANDARD HOOK DEVELOPMENT LENGTH (Ldh) AND LAP SPLICE (Ls) ARE IN INCHES. DEVELOPMENT, STANDARD HOOK DEVELOPMENT AND LAP SPLICES LENGTHS OF EXPOXY-COATED REINFORCEMENT SHALL BE 1.2 TIMES THE VALUES OF THE ABOVE TABLE.

- F. ALL HOOKS SHALL BE STANDARD HOOKS, UNO.
- G. CONCRETE PROTECTION FOR REINFORCING STEEL, UNLESS OTHERWISE SHOWN ON THE DRAWINGS, SHALL BE:
 - 1. 3" FOR CONCRETE CAST AGAINST EARTH.
 - 2. 2" FOR ALL OTHER SURFACES.
- H. NO BENDING OF REBARS IN THE FIELD ALLOWED.

J. TEST

- 1. SLUMP TEST:
 - a. AT LEAST ONE TEST AT THE DELIVERY TRUCK FOR EACH TRUCKLOAD BUT NOT AT THE END OF THE PUMP HOSE.
 - b. TESTING OF SLUMP SHALL BE IN ACCORDANCE WITH ASTM C143.
- 2. COMPRESSION TESTS:
 - a. ONE SAMPLE FOR EACH DAY OF PLACEMENT AND ONE SAMPLE FOR EACH MIX DESIGN.
 - b. A SAMPLE SHALL CONSIST OF TAKING 6 CYLINDERS MADE AND CURED IN ACCORDANCE WITH ASTM C31.
 - c. 2 CYLINDERS SHALL BE TESTED AT 7 DAYS, 2 AT 28 DAYS, AND 2 SHALL BE HELD.
 - d. TESTING OF CYLINDERS SHALL BE IN ACCORDANCE WITH ASTM C39.
- 3. DRYING SHRINKAGE TESTS:
 - a. ONE TEST (3 SPECIMENS) PER CONCRETE MIX.
 - b. TESTING OF DRYING SHRINKAGE SHALL BE IN ACCORDANCE WITH ASTM C157 AND ASTM C490.

K. CURING AND PROTECTION

- 1. CURING OF CONCRETE SHALL CONFORM WITH APPLICABLE REQUIREMENTS OF ACI 301 AND ACI 308R.
- 2. KEEP CONCRETE IN A MOIST CONDITION FROM THE TIME IT IS PLACED UNTIL IT HAS CURED FOR MINIMUM 7 DAYS.
- 3. KEEP FORMS DAMP AND COOL UNTIL REMOVAL OF FORMS.
- 4. IMMEDIATELY UPON REMOVAL OF FORMS, EXPOSED CONCRETE SURFACES SHALL BE KEPT MOIST BY APPLYING AN APPROVED CURING COMPOUND OR BY COVERING WITH DAMP CURING MATERIALS.
- 5. PROTECT EXPOSED CONCRETE CORNERS FROM TRAFFIC OR USE THAT WILL DAMAGE THEM.
- 6. PROTECT CONCRETE DURING THE CURING PERIOD FROM MECHANICAL AND PHYSICAL STRESSES INCLUDING HEAVY EQUIPMENT MOVEMENT, SUBJECTING THE CONCRETE TO LOAD STRESS, LOAD SHOCK, OR EXCESSIVE VIBRATION.

5. REQUIRED SUBMITTALS

- A. CONCRETE MIX DESIGN.
- B. REBAR SHOP DRAWINGS.
- C. CERTIFICATES FOR REINFORCING STEEL.
 - 1). FOR EACH LOT OR LOAD OF REINFORCING STEEL DELIVERED TO THE JOBSITES, FURNISH MILL AFFIDAVITS OR TEST REPORTS OF COMPLIANCE OR SIMILAR CERTIFICATION, CERTIFYING THE GRADES AND PHYSICAL AND CHEMICAL PROPERTIES OF THE REINFORCING STEEL AND CONFORMANCE WITH APPLICABLE ASTM SPECIFICATIONS.

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION

1. SPECIAL INSPECTOR

- A. THE SPECIAL INSPECTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCY (CONSTRUCTION THAT DEVIATES FROM APPROVED CONSTRUCTION DOCUMENTS) IDENTIFIED SO THAT CORRECTIVE ACTION CAN BE TAKEN. IF THE DISCREPANCY IS NOT CORRECTED IMMEDIATELY, IT SHALL BE BROUGHT TO THE ATTENTION OF OCSAN AND TO THE ENGINEER AS REQUIRED BY 2019 CBC, SECTION 1704.2.4.

2. REQUIRED SPECIAL INSPECTION & TESTING

A. CONCRETE

REQUIRED VERIFICATION AND INSPECTION FOR CONCRETE.

| | VERIFICATION AND INSPECTION | CONTINUOUS | PERIODIC |
|----|---|------------|----------|
| 1. | INSPECTION OF REINFORCING STEEL GRADE, SIZE AND PLACEMENT. | - | X |
| 2. | VERIFY USE OF REQUIRED DESIGN MIX. | - | X |
| 3. | AT THE TIME FRESH CONCRETE SHALL BE SAMPLED FOR EACH TRUCK TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP TESTS IF SUPERPLASTICIZER OR SCC CONCRETE IS NOT USED. DETERMINE TEMPERATURE OF CONCRETE. SLUMP SHALL CONFORM TO REQUIREMENTS OF APPROVED MIX DESIGN. FOUR (4) COMPRESSION CYLINDERS SHALL BE PERFORMED FOR EACH TRUCK. A COMPRESSION TEST WILL CONSIST OF THE AVERAGE OF TWO (2) CYLINDER BREAKS PERFORMED SEVEN (7) DAYS AFTER PLACEMENT. THE SECOND TEST SHALL BE PERFORMED 28 DAYS AFTER PLACEMENT. RESULTS OF TESTS SHALL BE DISTRIBUTED TO THE ENGINEER AND CONTRACTOR. | - | X |
| 4. | INSPECTION OF CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES. | X | - |
| 5. | INSPECTION FOR MAINTENANCE OF SPECIFIED CURING, TEMPERATURE AND TECHNIQUES. | - | X |
| 6. | INSPECTION OF FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED. | - | X |
| 7. | INSPECTION OF PLACEMENT OF NON-SHRINK AND EPOXY GROUT. | - | X |

B. SPECIAL INSPECTION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL INSPECTIONS AND MAINTAINING THE PROJECT'S INSPECTION MAPPING DOCUMENTS. INSPECTOR SIGN-OFF APPROVAL SHALL BE RECORDED ON THE INSPECTION MAPPING DOCUMENTS FOR ALL REQUIRED INSPECTION ITEMS, INCLUDING RE-INSPECTIONS ASSOCIATED WITH CONSTRUCTION DEFICIENCY NOTICES. ALL INSPECTION SIGN-OFFS SHALL BE OBTAINED PRIOR TO ADVANCING THE WORK. ALL WORK PERFORMED WITHOUT THE REQUIRED INSPECTIONS AND APPROVALS SHALL BE REMOVED AND REPLACED AT NO COST TO OCSAN.

3. STRUCTURAL OBSERVATION

- A. STRUCTURAL OBSERVATION IS REQUIRED AND MUST BE PERFORMED BY ENGINEER OF RECORD (EOR) OR A LICENSED CIVIL OR STRUCTURAL ENGINEER HIRED BY THE OWNER. THE STRUCTURAL OBSERVER WILL SUBMIT A WRITTEN STATEMENT TO OC SAN PER SECTION 1704.4 (2019 CBC) AT CONCLUSION OF WORK ALONG WITH STRUCTURAL OBSERVATION REPORTS.
- B. CONSTRUCTION HOLD POINTS FOR STRUCTURAL OBSERVATION.
 - 1) THE ENGINEER WILL PERFORM STRUCTURAL OBSERVATION PER THE 2019 CBC. AT THE STAGES OF CONSTRUCTION LISTED BELOW. THE CONTRACTOR SHALL PROVIDE TWO WORKING DAYS NOTICE AND ACCESS FOR THE ENGINEER TO PERFORM OBSERVATION.

| ITEM | OBSERVED BY EOR | COMMENT |
|---|-----------------|---------|
| 1. AFTER INSTALLATION OF REBAR AND ANCHOR BOLTS, BUT PRIOR TO FIRST CONCRETE POUR | X | |
| 2. AS REQUIRED TO ADDRESS STRUCTURAL ISSUES | X | |
| 3. VERIFY USE OF REQUIRED DESIGN MIX. | - | X |

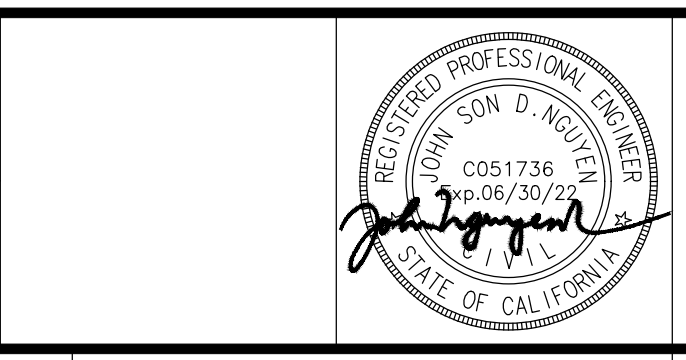
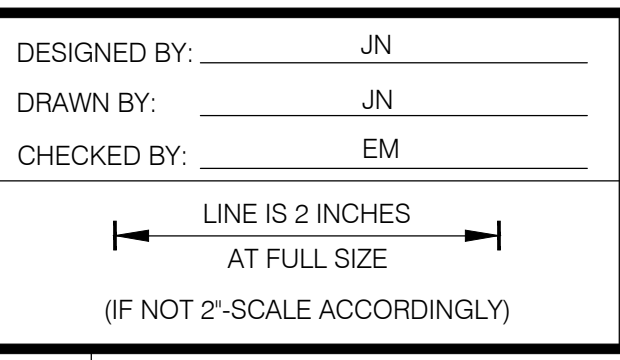
- 2) A FIELD REPORT WILL BE SUBMITTED TO OCSAN FOLLOWING EACH SITE OBSERVATION.
- 3) STRUCTURAL OBSERVATION IS FOR GENERAL CONFORMANCE OF THE STRUCTURAL DRAWINGS AND SPECIFICATIONS. OC SAN WILL PROVIDE INSPECTORS FOR SPECIAL INSPECTIONS.

ABBREVIATIONS:

| | |
|------------|---------------------|
| BOT | BOTTOM |
| BRG | BEARING |
| DBL | DOUBLE |
| DEPT | DEPARTMENT |
| DIA OR Ø | DIAMETER |
| EF | EACH FACE |
| EL | ELEVATION |
| EOR | ENGINEER OF RECORD |
| EQS | EQUAL SPACING |
| EQUIV | EQUIVALENT |
| EX OR (E) | EXISTING |
| FOC | FACE OF CONCRETE |
| FOW | FACE OF WALL |
| GR | GUARDRAIL |
| GRTG | GRATING |
| MTL(S) | MATERIALS |
| N | NORTH |
| OPP | OPPOSITE |
| R | RADIUS |
| ROW OR R/W | RIGHT OF WAY |
| REQD | REQUIRED |
| REV | REVISION |
| SF | SQUARE FEET |
| SHT | SHEET |
| SP | SPACE |
| SPCS | SPACES |
| SS | STAINLESS STEEL |
| STD | STANDARD |
| STR | STRUCTURAL |
| SYM | SYMMETRICAL |
| TME | TO MATCH EXISTING |
| TOT | TOTAL |
| VCP | VITRIFIED CLAY PIPE |
| VIF | VERIFY IN FIELD |
| WT | WEIGHT |

DWG: C:\Users\ngaganj1\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-S-010.dwg
DATE: Nov 19, 2021 8:39am
USER: ngaganj1

| | | | |
|-----------------|-------------|------|-------|
| DESIGNED BY: JN | | | |
| DRAWN BY: JN | | | |
| CHECKED BY: EM | | | |
| DATE: 11/19/21 | | | |
| MARK | DESCRIPTION | DATE | APPR. |



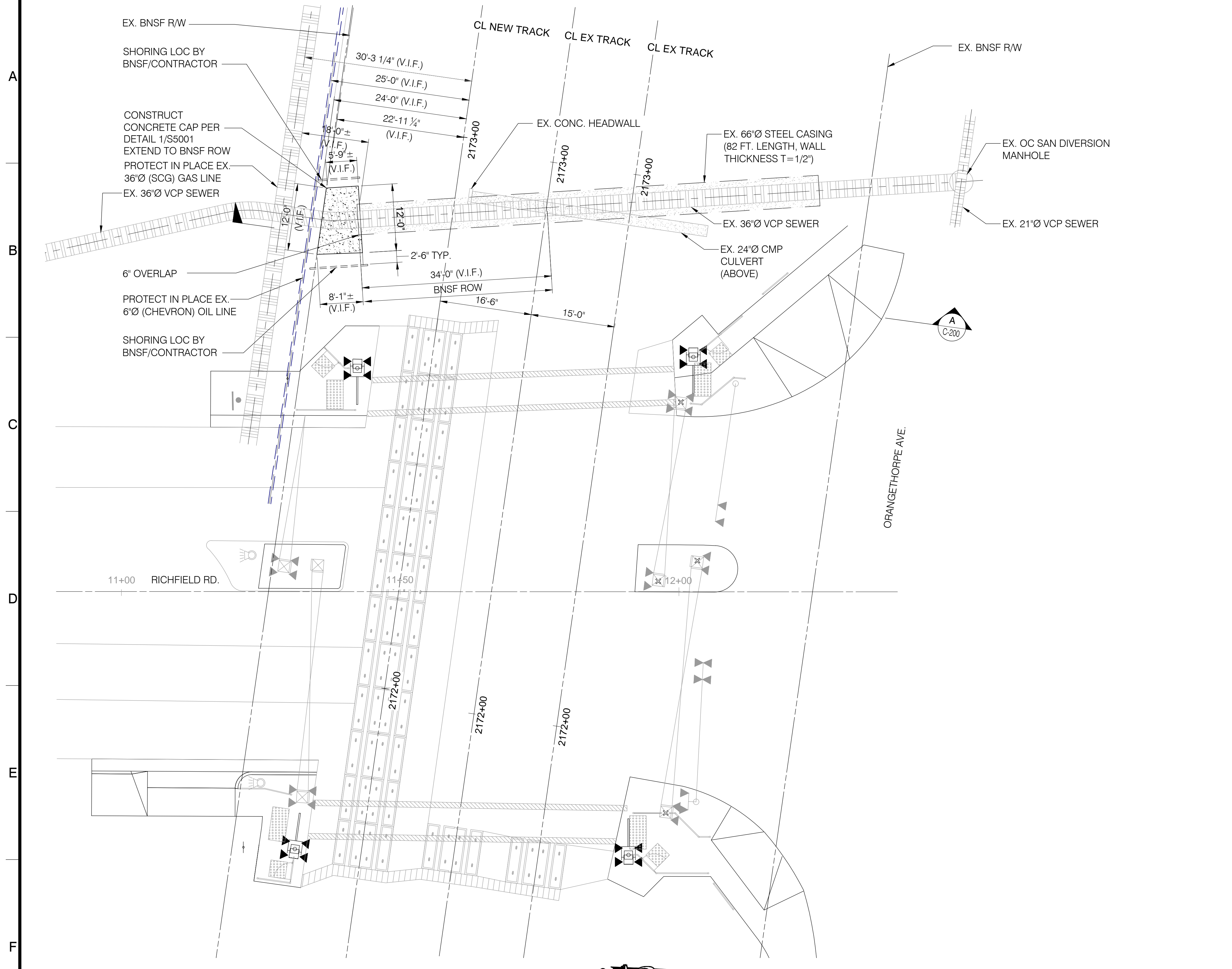
RICHFIELD SUBTRUNK ENCASEMENT FOR BNSF RAILWAY ADDITION

GENERAL NOTES, SPECIAL INSPECTIONS AND ABBREVIATIONS

FRC-0011

DRAWING NO. **S-010**

X OF -



NOTES

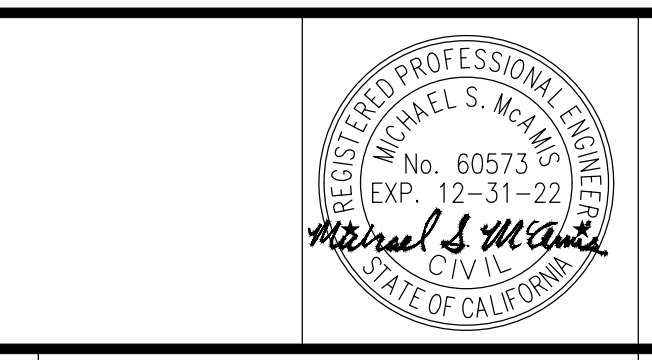
1. CONTRACTOR SHALL COORDINATE WITH CHEVRON AND SOUTHERN CALIFORNIA GAS COMPANY AND MUST LOCATE THE EXISTING PIPE PRIOR TO EXCAVATION FOR ENCASEMENT CONSTRUCTION.
 - A. CHEVRON CONTACTS:
 - i LANCE BURTON
661-654-7678
281-740-8875, cell
LanceBurton@chevron.com
 - ii SARAH GRASSI
661-654-7167
SGrassi@chevron.com
 - B. SOUTHERN CALIFORNIA GAS COMPANY CONTACT:
 - i Emily Quagliariello (Transmission - Engineer)
EQuagliariello@socalgas.com
213-244-3724
747-777-0314
2. REFER TO ORANGE COUNTY SANITATION DISTRICT (OCSAN) NO. 2 OF ORANGE COUNTY CALIFORNIA CONSTRUCTION PLANS, RICHFIELD SUB-TRUNK (ORANGETHORPE TO LA PALMA), CONTRACT NO. 2-19, ORCHARD (KELLOGG) SUB-TRUNK (ORANGETHORPE TO LA PALMA), CONTRACT NO. 2-20 RECORD DRAWINGS FOR INFORMATION ON EXISTING 36-INCH SEWER.
3. REFER TO BNSF RAILWAY, ATWOOD TO ESPERANZA MP 35.7 TO 40.4 THIRD MAIN TRACK (3MT) PROJECT, PRELIMINARY GEOTECHNICAL DESIGN REPORT, ORANGE COUNTY, CALIFORNIA, DATED FEBRUARY 2021, BY HDR ENGINEERING, INC. FOR SOILS INFORMATION
4. CONTRACTOR SHALL REFER TO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC) "GREENBOOK" SPECIFICATIONS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 - o Gravity Pipe
 - 207-17 PVC Gravity Pipe
 - o 306 Open Trench Condit Construction
 - 306-2 Delivery, Storage, Handling, and Protection of Pipeline Materials, Fittings, Valves, and Appurtenances
 - 306-3 Trench Excavation
 - 306-4 Shoring and Bracing
 - 306-6 Bedding
 - 306-7 Prefabricated Gravity Pipe
 - 306-12 Backfill
5. DIG ALERT:
BEFORE COMMENCING ANY DEMOLITION OR EARTH DISTURBANCE, THE CONTRACTOR SHALL OBTAIN A DIG ALERT INQUIRY I.D. NUMBER BY PHONING 811 OR 1-800-422-4133, OR GOING ON-LINE AT DIRECT.DIGALERT.ORG. TWO WORKING DAYS SHALL BE ALLOWED AFTER THE NUMBER IS OBTAINED AND BEFORE ANY EXCAVATION IS STARTED SO THAT UTILITY OWNERS CAN BE NOTIFIED.
6. IN ADDITION TO CONTACTING 811, THE CONTRACTOR MUST CALL BNSF SIGNALS AND TELECOM AT 1-800-533-2891 TO OBTAIN CLEARANCE PRIOR TO CONSTRUCTION.
7. NO WORK ON BNSF PROPERTY CAN BEGIN PRIOR TO CONTACTING THE BNSF ROADMASTER, ANDY TREVIZO, AT -323-864-3852, EMAIL: Andrew.Trevizo@bnsf.com
8. CONTRACTOR SHALL SUBMIT A SPILL RESPONSE PLAN TO ORANGE COUNTY SANITATION DISTRICT (OCSAN) FOR APPROVAL.
9. CONTRACTOR SHALL PROTECT-IN-PLACE THE EXISTING 36" VITRIFIED CLAY PIPE (VCP) SEWER AND SHALL TAKE PRECAUTIONS DURING EXCAVATION FOR ENCASEMENT TO MINIMIZE DISTURBANCE TO SOIL AROUND EXISTING SEWER LINE TO THE MAXIMUM EXTENT POSSIBLE.
10. IF EXISTING VCP SEWER IS DAMAGED DURING CONSTRUCTION OR FOUND TO BE BROKEN, LEAKING, OR OTHERWISE IN NEED OF REPAIR, THE CONTRACTOR SHALL REPLACE THE DAMAGED PIPE WITH PVC IN ACCORDANCE THE "GREENBOOK".
11. THE CONTRACTOR MUST CONTACT ORANGE COUNTY SANITATION DISTRICT TO ARRANGE FOR STOP GATE INSTALLATION TO REDUCE FLOW IN PIPE. CONTRACTOR SHALL PROVIDE 2 WEEKS NOTIFICATION MINIMUM.
12. PRIOR TO COMMENCING CONSTRUCTION THE CONTRACTOR MUST LOCATE A SUPPLY SOURCE FOR THE 36-INCH VCP PIPE, AND COUPLING CONNECTOR IN THE EVENT THE SECTIONS OF VCP PIPE IS DAMAGED AND REQUIRE REPLACEMENT. PROVIDE DOCUMENTATION TO OCSAN OF THE AVAILABILITY, TECHNICAL DETAILS AND LEAD TIME OF THE REPLACEMENT MATERIALS.
13. THE CONTRACTOR SHALL SUBMIT PRIOR TO EXCAVATION A BYPASS PLAN. IN ADDITION TO THE STOP GATE BEING INSTALLED BY OC SAN, CONTRACTOR TO FURNISH AND INSTALL PLUG DOWNSTREAM OF THE GATE TO ELIMINATE LEAKAGE FROM THE GATE PLUG SHALL BE FOR A 36-INCH VCP PIPE CONTRACTOR RESPONSIBLE FOR PERMITS AND TRAFFIC CONTROL TO ACCESS THE MANHOLE IN ORANGETHORPE AVE.
14. NO EXISTING DIRT MATERIAL SHALL LEAVE BNSF PROPERTY.

OVERALL PLAN
SCALE: 1" = 10'-0"
1
C-100
GRAPHIC SCALE: 1" = 10'-0"

DWG: C:\Users\mgaganj1\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-C-100.dwg
DATE: Nov 19, 2021 8:42am
USER: mgaganj1

| | |
|--------------|---------------------------|
| DESIGNED BY: | JN |
| DRAWN BY: | JN |
| CHECKED BY: | EM |
| DATE: | 11/19/21 |
| MARK | DESCRIPTION |
| A | ISSUE FOR FINAL SUBMITTAL |

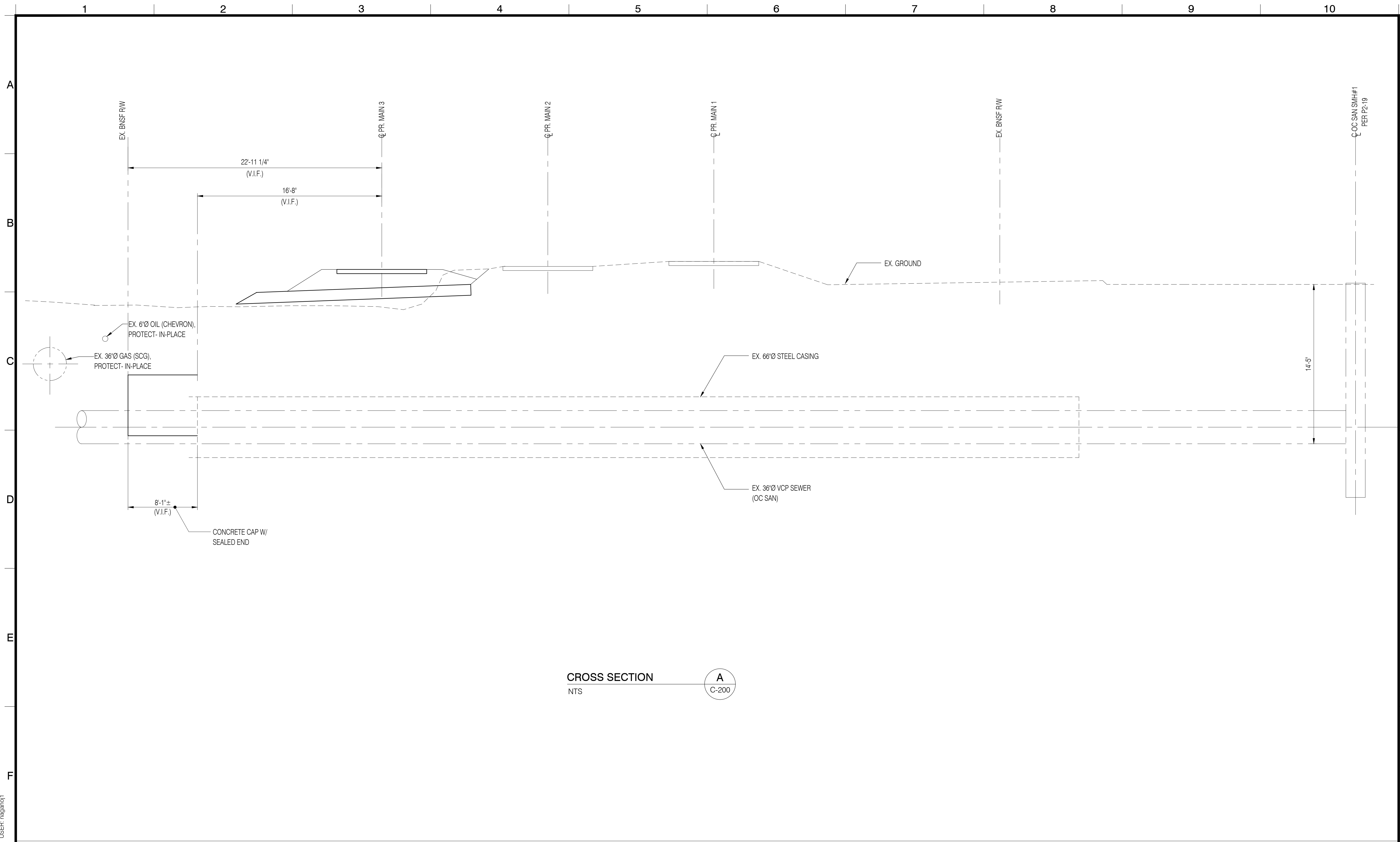
LINE IS 2 INCHES
AT FULL SIZE
(IF NOT 2"-SCALE ACCORDINGLY)



RICHFIELD SUBTRUNK ENCASEMENT FOR BNSF RAILWAY ADDITION
PROPOSED PIPE ENCASEMENT PLAN

FRC-0011
DRAWING NO.
C-100
OF -

DWG: C:\Users\maganoj1\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-C-200.dwg
 DATE: Nov 19, 2021 8:43am USER: maganoj1



CROSS SECTION
 NTS A
C-200

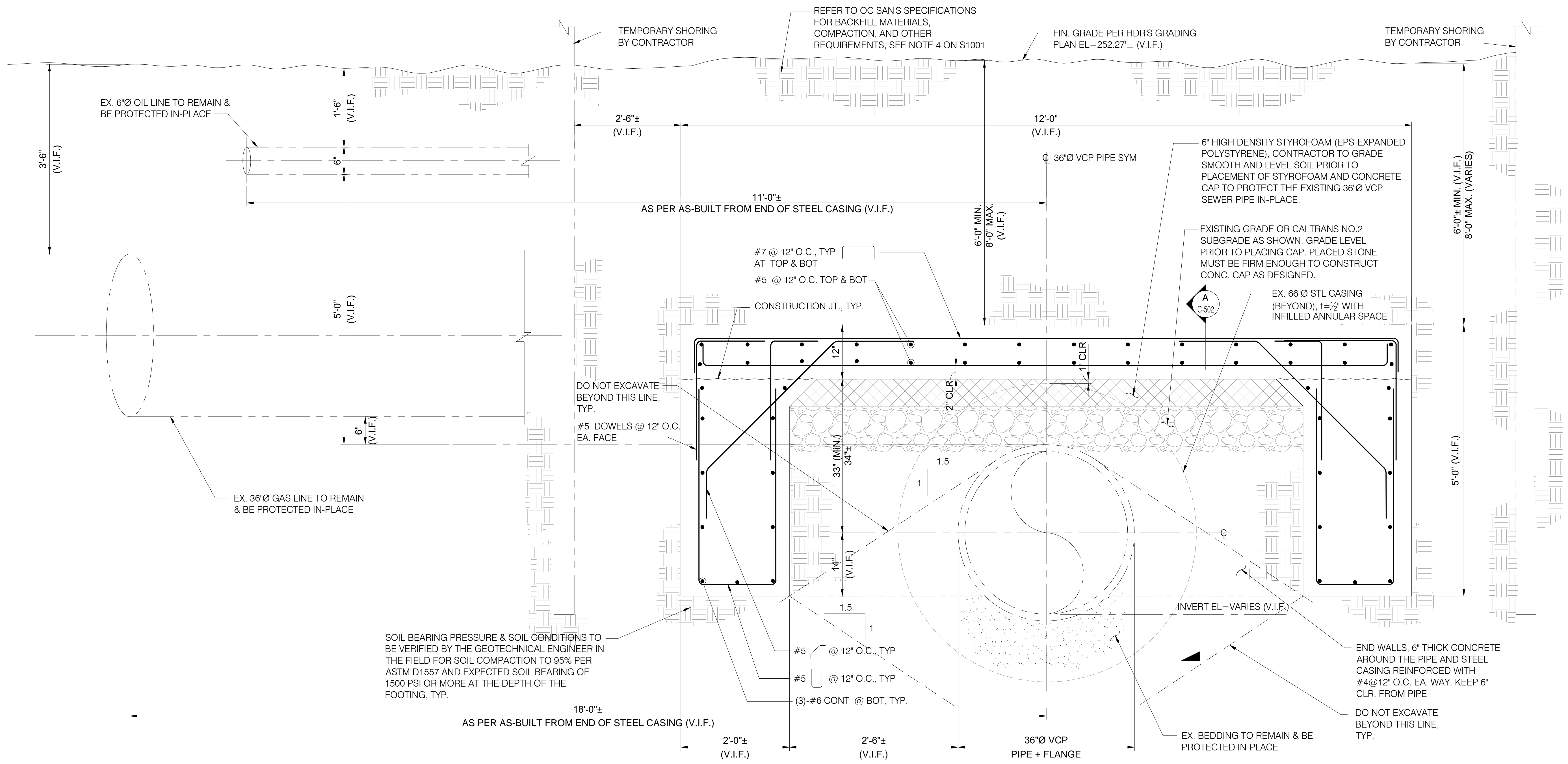
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|------|---------------------------|----------|-------|
| A | ISSUE FOR FINAL SUBMITTAL | 11/19/21 | |

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 DRAWN BY: JN
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 LINE IS 2 INCHES
 AT FULL SIZE
 (IF NOT 2" SCALE ACCORDINGLY)



RICHFIELD SUBTRUNK ENCASEMENT
 FOR BNSF RAILWAY ADDITION
 CROSS SECTION

FRC-0011
 DRAWING NO.
C-200
 OF -



CONCRETE CAP DETAIL 1
SCALE : 1" = 1'-0"

- NOTES:
- CONCRETE CAP OVER SEWER PIPE WILL EXTEND FROM THE END OF THE EXISTING STEEL CASING (APPROXIMATE AT STA2172+87) TOWARD SOUTH BY APPROXIMATELY 8 FT. LENGTH.

DWG: C:\Users\jagarcia\1\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-S-501.dwg
DATE: Nov 19, 2021 8:44am USER: jagarciaj

| | |
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| DATE: | 11/19/21 |
| MARK | DESCRIPTION |
| A | ISSUE FOR FINAL SUBMITTAL |

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2"-SCALE ACCORDINGLY)



RICHFIELD SUBTRUNK ENCASUREMENT FOR BNSF RAILWAY ADDITION

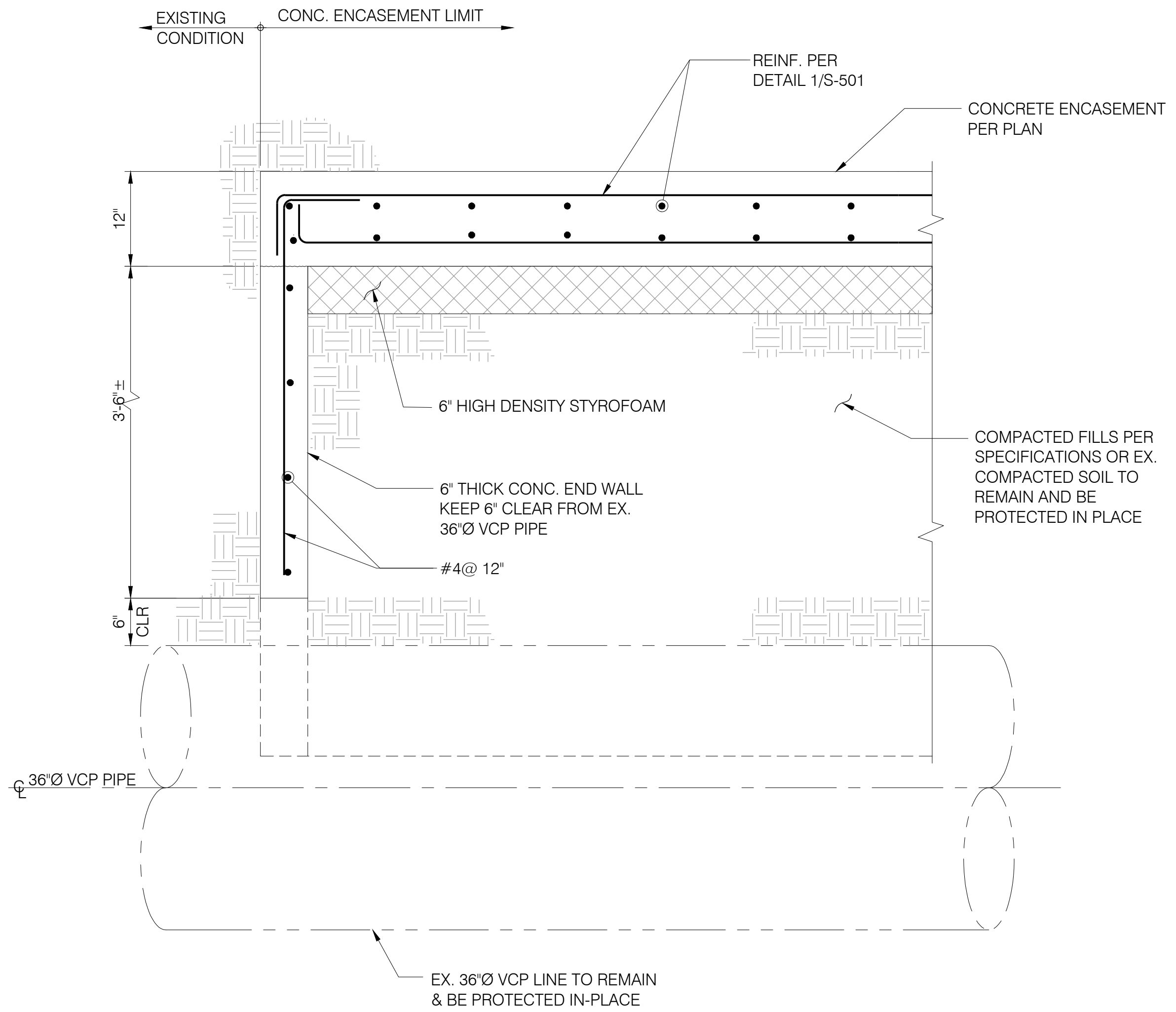
STRUCTURAL SECTIONS

FRC-0011

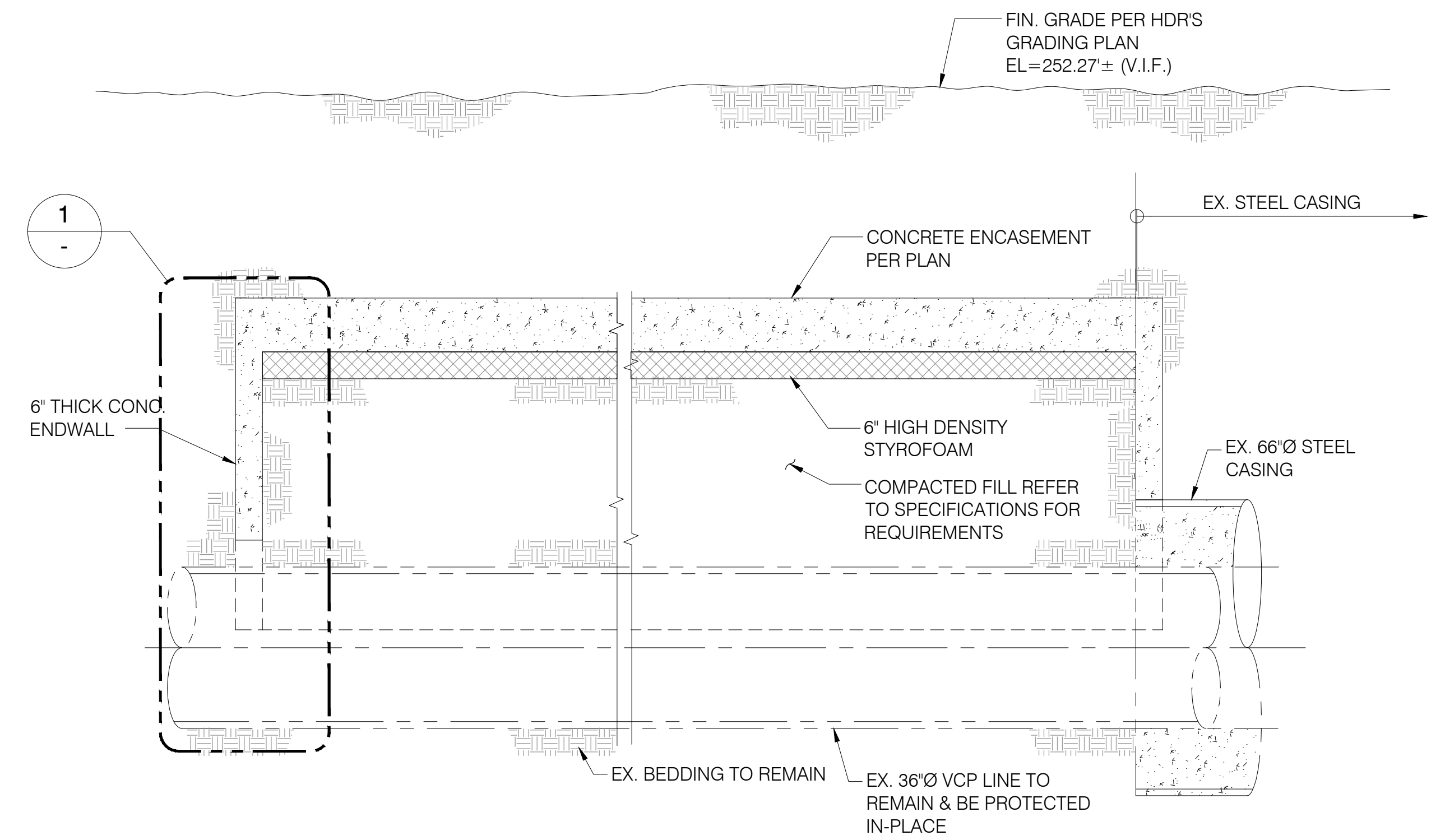
DRAWING NO.

S-501

OF -



ENLARGED DETAIL
SCALE : 1" = 1'-0"
1
S-502



SECTION AT ENDWALL
SCALE : 1/2" = 1'-0"
A
S-502

DWG: C:\Users\jagarcia\Documents\10-OC-SAN\Richfield Subtrunk Pipe Encasement\Cadd\Sheet\FRC-0011-S-502.dwg
DATE: Nov 19, 2021 8:45am USER: jagarciaj

| MARK | DESCRIPTION | DATE | APPR. |
|------|---------------------------|----------|-------|
| A | ISSUE FOR FINAL SUBMITTAL | 11/19/21 | |

DESIGNED BY: JN
DRAWN BY: JN
CHECKED BY: EM

LINE IS 2 INCHES AT FULL SIZE
(IF NOT 2" SCALE ACCORDINGLY)



RICHFIELD SUBTRUNK ENCASEMENT FOR BNSF RAILWAY ADDITION

STRUCTURAL SECTION AND DETAIL

FRC-0011
DRAWING NO.
S-502
OF -